INTERNATIONAL STANDARDS FOR PHYTOSANITARY MEASURES

Revision of ISPM No. 15

[PARAGRAPH 1]

REGULATING WOOD PACKAGING MATERIAL IN INTERNATIONAL TRADE

(200-)

[Work programme topic: Guidelines for regulating wood packaging material in international trade (revision of ISPM No. 15)]
[Specification No. 31]

[2]

CONTENTS

[3] # INTRODUCTION

[4] ## SCOPE

[5] This standard describes phytosanitary measures that reduce the risk of introduction and/or spread of quarantine pests associated with the movement in international trade of wood packaging material made from raw wood. Wood packaging material covered by this standard includes dunnage but excludes wood packaging made from wood processed in such a way that it is free from pests.

[6] The measures described in this standard are not intended to provide ongoing protection from contaminating pests (e.g. termites, mould fungi, snails, weed seeds) or other organisms (e.g. spiders).

[7] ## REFERENCES

[8] *Consignments in transit*, 2006. ISPM No. 25, FAO, Rome.
[9] *Export certification system*, 1997. ISPM No. 7, FAO, Rome.
[10] *Glossary of phytosanitary terms*, 2008. ISPM No. 5, FAO, Rome.
[11] *Guidelines for a phytosanitary import regulatory system*, 2004. ISPM No. 20, FAO, Rome.
[12] *Guidelines for inspection*, 2005. ISPM No. 23, FAO, Rome.
[13] *Guidelines on notification of non-compliance and emergency action*, 2001. ISPM No. 13, FAO, Rome.
[14] ISO 3166-1-alpha-2 code elements (http://www.iso.org/iso/english_country_names_and_code_elements).
[15] *International Plant Protection Convention*, 1997. FAO, Rome.
[16] *The Montreal Protocol on Substances that Deplete the Ozone Layer*, 2000. Ozone Secretariat, United Nations Environment Programme. ISBN: 92-807-1888-6 (http://www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf).

[17] ## DEFINITIONS

[18] Definitions of phytosanitary terms used in the present standard can be found in ISPM No. 5 (*Glossary of phytosanitary terms*).

[19] ## OUTLINE OF REQUIREMENTS

[20] Approved phytosanitary measures that significantly reduce the risk of pest spread via wood packaging material comprise a combination of approved treatments and recognized marking. Wood packaging material subjected to the approved treatments shall be identified by marking. The approved treatments, the mark and its application are described.

[21] Exporting and importing countries have specific responsibilities. The National Plant Protection Organizations (NPPOs) that authorize the use of the mark must control application of the treatments, authorization of the use of the mark and marking by authorized third parties, and must establish inspection procedures. Specific requirements apply to wood packaging material that is reused, repaired or remanufactured. The NPPO of the importing country should accept the approved phytosanitary measures as the basis for authorizing entry of wood packaging material without further phytosanitary import requirements and should verify on import that the requirements of the standard have been met. NPPOs are also responsible for measures implemented and notification where wood packaging material does not comply with the requirements of this standard.

[22] **REQUIREMENTS**

[23] **1. Basis for Regulating**

[24] Wood originating from living or dead trees may be infested by pests. Wood packaging material is frequently made of raw wood that may not have undergone sufficient processing or treatment to remove or kill pests and therefore becomes a pathway for the spread and introduction of quarantine pests. Dunnage has been shown to present a high risk of introduction of quarantine pests. Furthermore, wood packaging material is very often reused, repaired or remanufactured (described in section 4.3). The true origin of any piece of wood packaging material is difficult to determine, and thus its phytosanitary status cannot easily be ascertained. Therefore the normal process of undertaking risk analysis to determine if measures are necessary and the strength of such measures is frequently not possible for wood packaging material. For this reason, this standard describes internationally accepted measures that are approved and that may be applied to wood packaging material by all countries to reduce significantly the risk of spread and introduction of most quarantine pests as well as a number of other pests that may be associated with that material.

[25] **2. Regulated Wood Packaging Material**

[26] These guidelines are for all forms of wood packaging material[1] that may serve as a pathway for plant pests posing a threat mainly to living trees. They cover wood packaging material such as crates, dunnage, pallets and spools which can be present in almost any imported consignment, including consignments that would not normally be the target of phytosanitary inspection.

[27] **2.1 Exemptions**

[28] The following articles are usually considered to be of sufficiently low risk to be exempt from this standard[2]:

- wood packaging material made entirely from thin wood (6 mm or less in thickness)
- wood packaging made wholly of wood-based products such as plywood, particle board, oriented strand board or veneer that have been created using glue, heat or pressure, or a combination thereof
- barrels for wine and spirit that have been heated during manufacture
- gift boxes for wine, cigars and other commodities made from wood that has been processed and/or manufactured in a way that renders it free of pests
- sawdust, wood shavings and wood wool.

[29] **3. Phytosanitary Measures for Wood Packaging Material**

[30] **3.1 Approved phytosanitary measures**

[31] The approved phytosanitary measures described in this standard comprise a number of official procedures including a combination of treatments and marking of the wood packaging material. These phytosanitary measures should be accepted by all NPPOs as the basis for authorizing the entry of wood packaging material without further requirements.

[32] The treatments described in Annex 1 are considered to be significantly effective against most pests associated with wood packaging material used in transport. These treatments have been adopted based on consideration of:

- the range of pests that may be affected
- the efficacy of the treatment
- the technical and/or commercial feasibility.

[33] Wood packaging material subjected to these approved measures shall be identified by marking with an official mark in accordance with Annex 2, the mark consisting of the symbol used in close conjunction with codes identifying the specific country and producer of the wood packaging material. Hereafter, all components of such a mark are referred to collectively as “the mark”. Use of the mark addresses operational difficulties associated with the verification of compliance with the treatments for wood packaging material contained in this standard. An internationally recognized, non-language-specific mark facilitates verification during inspection at the point of export, at the point of entry or elsewhere. The mark as referred to in Annex

[1] Wood packaging material is usually made from true woody plants such as conifers and woody dicots. However, packaging may also be made of wood-like material from certain monocotyledonous plants such as bamboo and palm. Such material also presents risks of quarantine pests and should be considered to be within the scope of this standard.

[2] Not all types of gift boxes or barrels are constructed in a manner that renders them pest free, and therefore certain types may be considered to be within the scope of this standard. Where appropriate, specific arrangements related to these types of commodities may be established between importing and exporting NPPOs.

2 should be accepted by all NPPOs as the basis for authorizing the entry of wood packaging material without further requirements.

[34] **3.2 Approval of new or revised treatments**

[35] As new technical information becomes available, existing treatments may be reviewed and modified, and other treatments for wood packaging material may be adopted by the Commission on Phytosanitary Measures (CPM).

[36] **3.3 Alternative requirements**

[37] Alternative requirements for wood packaging material may be established bilaterally between countries. In these cases, the mark shown in Annex 2 must not be used.

[38] **4. Responsibilities of NPPOs**

[39] To meet the objective of preventing the spread and introduction of pests (Article I.1 of the IPPC), both exporting and importing countries have specific responsibilities outlined below and must verify that the requirements of this standard have been met.

[40] **4.1 Regulatory considerations**

[41] Those NPPOs that authorize the mark have the responsibility for ensuring that all systems authorized for implementation of this standard meet all necessary requirements described within the text, and that wood packaging material (or wood that is to be made into wood packaging material) bearing the mark has been treated and/or manufactured in accordance with this standard. Responsibilities include:

- registration or accreditation and auditing of any commercial companies that may have been authorized to apply the measures and/or apply the mark to the wood packaging material
- monitoring certification and marking systems in order to verify compliance (further information on related responsibilities is provided in ISPM No. 7: *Export certification system*)
- establishing inspection procedures (further information is provided in ISPM No. 23: *Guidelines for inspection*).

[42] Treatment and marking must always be under control of the NPPO. The NPPO should supervise (or, as a minimum, audit or review) the application of the treatments, authorization of the use of the mark and marking by authorized third parties. To reduce or prevent the possibility of untreated wood packaging material bearing the mark moving in international trade, treatment should normally be carried out prior to marking.

[43] **4.2 Marking**

[44] Marks applied to wood packaging material treated in accordance with this standard must conform to the requirements described in Annex 2.

[45] **4.3 Treatment and marking requirements for wood packaging material that is reused, repaired or remanufactured**

[46] NPPOs of exporting contracting parties are responsible for ensuring and verifying that wood packaging material that bears the mark described in Annex 2 and that is repaired or remanufactured complies fully with this standard. Repaired and remanufactured wood packaging material may be constructed using wood originating from several sources. All new components added to such wood packaging material must be made of wood treated and marked in accordance with this standard or be constructed or fabricated from processed wood material.

[47] **4.3.1 Reuse of wood packaging material**

[48] A unit of wood packaging material that has been treated and marked in accordance with this standard and that has not been repaired, remanufactured or otherwise altered does not require re-treatment or re-marking when undergoing a second or subsequent use.

[49] **4.3.2 Repaired wood packaging material**

[50] Repaired wood packaging material is wood packaging material that has had one or more components removed and replaced. If less than approximately one-third of the components of a unit of wood packaging material are replaced, the unit is considered to be repaired. NPPOs of exporting countries should ensure that

when marked wood packaging material is repaired, wood treated and marked in accordance with this standard is used.

[51] In circumstances where there is any doubt that all components of a unit of repaired wood packaging material have been treated in accordance with this standard, the NPPO of the exporting country should require the repaired wood packaging material to be re-treated. Any previous applications of the mark must be permanently obliterated (e.g. by covering with paint or grinding) or, in the case of tags or labels, destroyed. The mark must then be applied anew in accordance with this standard.

[52] **4.3.3 Remanufactured wood packaging material**

[53] If more than approximately one-third of the components of a unit of wood packaging material are replaced, the unit is considered to be remanufactured. In a remanufacturing process, wood packaging material is dismantled (partially or completely), and the components (with additional reworking if necessary) are then reassembled into further wood packaging material. Remanufactured wood packaging material may therefore incorporate both new and previously used components.

[54] Remanufactured wood packaging material, regardless of its intended use, must have any previous applications of the mark permanently obliterated (e.g. by covering with paint or grinding) or, in the case of tags or labels, destroyed. If the wood packaging material is to be used in international trade, the remanufactured wood packaging material must be re-treated and the mark must then be applied anew in accordance with this standard.

[55] **4.4 Transit arrangements**

[56] Where consignments moving in transit have wood packaging material that has not met the requirements for approved phytosanitary measures, the NPPO(s) of the country(ies) of transit may require measures to ensure that wood packaging material does not present an unacceptable risk. Further guidance on transit arrangements is provided in ISPM No. 25 (*Consignments in transit*).

[57] **4.5 Procedures upon import**

[58] The regulation of wood packaging material may require that NPPOs have policies and procedures for other aspects of their responsibilities related to wood packaging material.

[59] Since wood packaging materials are associated with most shipments, including those not normally the target of phytosanitary inspections, cooperation with bodies not normally involved with meeting phytosanitary export conditions or import requirements is important. For example, cooperation with Customs organizations may be important to ensure effectiveness in detecting potential non-compliance of wood packaging material.

[60] **4.6 Measures for non-compliance at point of entry**

[61] Information on non-compliance and emergency action is provided in section 5.1.6 of ISPM No. 20 (*Guidelines for a phytosanitary import regulatory system*), and on notification of the exporting country in ISPM No. 13 (*Guidelines on notification of non-compliance and emergency action*).

[62] Where wood packaging material does not carry the required mark or there is evidence of a failure of a treatment, action may be taken. Minimal impact should be considered for the action. This action may take the form of detention, removal of non-compliant material, treatment, destruction or reshipment. Further examples of options for actions are provided in Appendix 1. The NPPO of the importing country should notify the exporting country or the manufacturing country, where applicable, in cases where live pests are found. NPPOs are also encouraged to notify cases of missing marks and other cases of non-compliance.

[63] **ANNEX 1**

[64] **APPROVED TREATMENTS ASSOCIATED WITH WOOD PACKAGING MATERIAL**

[65] Note that when a revised schedule is adopted for treatment of wood packaging, material treated under the previous treatment schedule does not need to be re-treated, re-marked or recertified.

[66] Removal of bark is to be applied in addition to one of the other treatments as specified below. However, any number of small pieces of bark may remain after removal of bark:

- if they are less than 3 centimetres in width (regardless of the length) or
- if greater than 3 centimetres in width, with the total surface area of an individual piece of bark less than 50 square centimetres.

[67] **Heat treatment**

[68] Wood packaging material should be heated in accordance with a specific time–temperature schedule that achieves a minimum temperature of 56°C for a minimum of 30 continuous minutes throughout the entire profile of the wood (including at its core). Various energy sources or processes may be suitable to achieve these parameters. For example, kiln-drying, chemical pressure impregnation, microwave or other treatments may be considered heat treatments provided that they meet the heat treatment requirements described in this standard.

[69] Appendix 2 contains further guidelines for effective heat treatment.

[70] **Methyl bromide treatment**

[71] Methyl bromide is widely considered to be harmful to the ozone layer[3]. In accordance with the IPPC recommendation (*Replacement or reduction of the use of methyl bromide as a phytosanitary measure*), NPPOs are encouraged to promote the use of alternative measures approved in this standard.

[72] The removal of bark stipulated above must always precede the application of fumigation.

[73] The wood packaging material must be fumigated with methyl bromide in accordance with a schedule that achieves the minimum CT (concentration-time product[4]) over 24 hours at the temperature and final concentration specified in Table 1 throughout the wood (including at its core). The minimum temperature must not be less than 10°C and the minimum exposure time must be 24 hours. Monitoring of concentrations must be carried out at a minimum at 2, 4 and 24 hours.

[74] **Table 1**: Minimum CT over 24 hours for wood packaging material fumigated with methyl bromide

[row1]	**Temperature**	**CT ($g \cdot h \cdot m^{-3}$) over 24 h**	**Final concentration (g/m^3)**
[row2]	21°C	650	24
[row3]	16°C	800	28
[row4]	10°C	900	32

[75] One example of a schedule that may be used for achieving the specified requirements is shown in Table 2.

[3] Contracting parties to the IPPC may also have obligations under the Montreal Protocol on Substances that deplete the Ozone Layer.

[4] The CT product utilized for methyl bromide treatment in this standard is the sum of g/m^3 per hour over a period of 24 hours.

[76] **Table 2**: Example of a treatment schedule that achieves minimum CT for wood packaging material treated with methyl bromide

	Temperature	Dosage (g/m^3)	Minimum concentration (g/m^3) at:			
			2 h	4 h	12 h	24 h
[row2]	21°C or above	48	36	31	28	24
[row3]	16°C or above	56	42	36	32	28
[row4]	10°C or above	64	48	42	36	32

[77] NPPOs should ensure that the following factors are appropriately addressed within their official procedures governing the application of methyl bromide treatment:

- Fans must be used as appropriate during the period of fumigation and must be positioned to ensure that the fumigant is rapidly and effectively distributed throughout the fumigation enclosure.
- Fumigation enclosures must not be loaded beyond 80% of their volume.
- Fumigation enclosures must be gas tight.
- The fumigation site floor must be impermeable to the fumigant if fumigation under gas-proof sheets is to be carried out.
- Methyl bromide must be applied through a vaporizer (hot gassing) in order to fully volatilize the fumigant prior to its entry into the fumigation enclosure.
- Methyl bromide treatment must not be carried out on wood packaging material exceeding 20 cm in minimum cross section. Wood stacks need separators at least every 20 cm in thickness to ensure adequate methyl bromide penetration.
- When calculating methyl bromide dosage, compensation must be made for any gas mixtures (e.g. 2% chloropicrin).
- Initial dose rates and post-treatment product handling procedures must take account of likely methyl bromide sorption by the treated wood packaging material or associated product (e.g. polystyrene boxes).
- Product temperature must be equivalent to the measured ambient air temperatures used to calculate methyl bromide dose, and should always be at least 10°C.
- Care should be taken to ensure any product associated with the wood packaging material will not be damaged by the application of a methyl bromide treatment.
- Wood packaging material to be fumigated must not be wrapped or coated in materials impervious to the fumigant.

[78] **ANNEX 2**

[79] **THE MARK AND ITS APPLICATION**

[80] A mark indicating that wood packaging material has been subjected to approved phytosanitary treatment in accordance with ISPM No. 15 comprises the following required components:

- the symbol
- a country code
- a producer code.

[81] **Symbol**

[82] The design of the symbol (which may have been registered under national, regional or international procedures, as either a trademark or a certification/collective/guarantee mark) must resemble closely that shown in the examples illustrated below and must be presented to the left of the other components.

[83] **Country code**

[84] The country code must be the International Organization for Standards (ISO) two-letter country code (shown in the examples as "XX"). It must be separated by a hyphen from the producer code.

[85] **Producer code**

[86] The producer code is a unique code assigned by the NPPO to the producer of the wood packaging material, which is responsible for ensuring appropriate wood is used and properly marked (shown in the examples as "000"). The number and order of digits and/or letters are assigned by the NPPO.

[87] The resulting mark must be legible. The size and position of the mark may vary, but its size must be sufficient to be both visible and legible to inspectors without the use of a visual aid. The mark must be contained within a border with a vertical line separating the symbol from the code components. To facilitate the use of stencilling, small gaps in the border and the vertical line may be present.

[88] No other information shall be contained within the border of the mark.

[89] The mark must be:

- legible
- durable and, in the case of tags or labels, not transferable
- placed in a visible location, preferably on at least two opposite sides of the article being certified.

[90] The mark must not be hand drawn.

[91] The use of red or orange should be avoided because these colours are used in the labelling of dangerous goods.

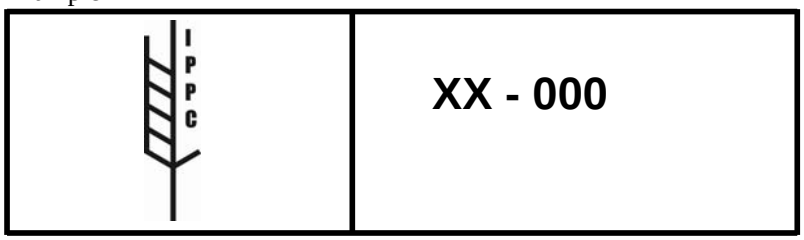
[92] Where various components are integrated into a unit of wood packaging material, the resultant composite unit should be considered as a single unit for marking purposes. On a composite unit of wood packaging material made of both treated wood and processed wood material (where the processed component does not require treatment), it may be appropriate for the mark to appear on the processed wood material components to ensure that the mark is in a visible location and is of a sufficient size. This approach to marking applies only to composite single units, not to temporary assemblies of wood packaging material.

[93] Special consideration of marking dunnage legibly may be necessary because treated wood for use as dunnage may not be cut to final length until loading of a conveyance takes place. It is important that shippers, under the supervision of the NPPO, ensure that all dunnage used to secure or support commodities is treated and displays the mark described in this annex, and that the marks are clear and legible. Options for achieving this include:

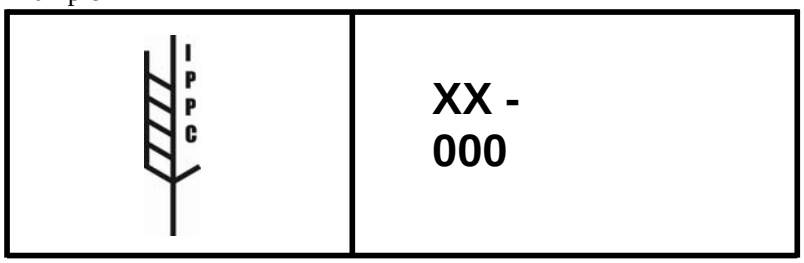
- marking of pieces of wood intended for use as dunnage along their entire length at very short intervals (NB: Where very small pieces are subsequently cut for use as dunnage, the cuts should be made so that an entire mark is present on the dunnage used. Small pieces of wood that do not include all the required elements of the mark should not be used for dunnage.)
- additional marking of treated dunnage in a visible location after cutting.

[94] The examples below illustrate some acceptable variants of the required components of the mark that is used to certify that the wood packaging material that bears such a mark has been subjected to an approved phytosanitary measure.

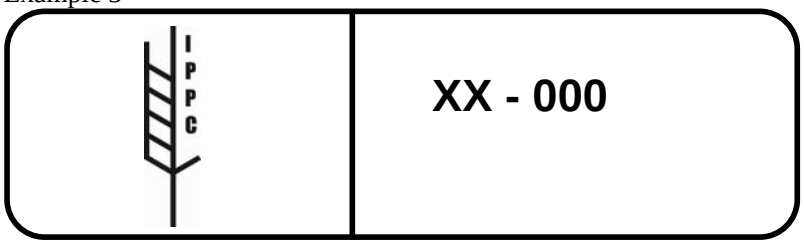
[95] Example 1



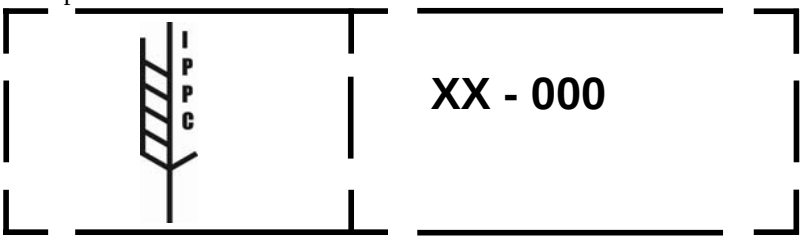
[96] Example 2



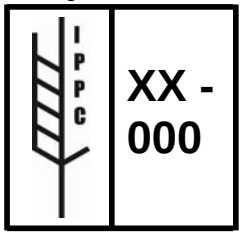
[97] Example 3



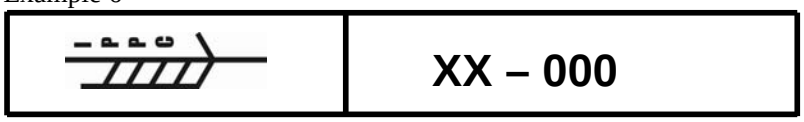
[98] Example 4



[99] Example 5



[100] Example 6



[101] **APPENDIX 1**

[102] **EXAMPLES OF METHODS OF SECURE DISPOSAL OF NON-COMPLIANT WOOD PACKAGING MATERIAL**

[103] Non-compliant wood packaging material may require treatment (as described in Annex 1 of this standard) or secure disposal in order to prevent escape of any pest(s) detected.

[104] Secure disposal of non-compliant wood packaging material is a risk management option that may be used by the NPPO of the importing country when treatment is either not available or is not desirable. The methods listed below are recommended for the secure disposal of non-compliant wood packaging material where disposal is required:

- incineration
- deep burial in sites approved by appropriate authorities (NB: The depth of burial may depend on climatic conditions and the pest intercepted, but is recommended to be at least 1 metre. The material should be covered immediately after burial and should remain buried. Note, also, that deep burial is not a suitable disposal option for wood infested with termites.)
- processing (NB: Chipping should be used only if combined with further processing in a manner approved by the NPPO of the importing country for the elimination of pests of concern, e.g. the manufacture of oriented strand board.)
- other methods endorsed by the NPPO as effective for the pests of concern.

[105] In order to minimize phytosanitary risks, secure disposal methods where required should be carried out with the least possible delay.

[106]

APPENDIX 2

[107]

GUIDELINES FOR HEAT TREATMENT

[108] This appendix is for reference purposes only and is not a prescriptive part of the standard. Guidelines for heat treatment will be added in the future when agreed by the CPM.